

ABSTRACT

A multipath-combining subsystem for receiving a spread-spectrum signal arriving from a plurality of paths. A header-matched filter detects each match, within each path, of a header-chip-sequence signal with a first impulse response and outputs a header-detection signal having a header amplitude and a respective chip location. A data-matched filter detects at the respective chip location of each header-detection signal, a respective data-chip-sequence signal and outputs a data-detection signal having a data amplitude. A combiner multiplies the header amplitude of each header-detection signal and the data amplitude of the respective data symbol to generate a plurality of weighted elements for each data symbol. The combiner then adds the plurality of weighted elements for each data symbol as a sum signal of the respective data symbol.

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